

AMENDMENTS TO THE SPECIFICATION:

Replace the first paragraph on page 5 of the clean copy of the substitute with the following;

It is also possible as an alternative to this for the optical fibres 11, 12, 13, 14, 15, 16, 17 and 18 to be integrated into the surface of the workpiece 10. In this case, recesses 31, 32, 33, 34, 35, 36, 37 and 38 which preferably have a width of 0.2 to 0.25 mm and a depth of 0.3 mm are introduced into the surface of the workpiece 10. The recesses are consequently matched with regard to their width and depth to the diameter of the optical fibres 11, 12, 13, 14, 15, 16, 17 and 18 designed as Bragg grating sensors. Moreover, the course of the recesses corresponds to the geometrical configuration with which the corresponding optical fibre is to be attached to the surface of the workpiece 10. The recesses therefore run either rectilinearly or in a curved shape or the shape of a circular arc.